

HiCAMS User Guide

Chapter 2: Contract Maintenance

Section 5C: Working with Concrete and Concrete Classes

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About Concrete and Concrete Classes

New functionality in HiCAMS Version 6.4 now checks to be sure that the concrete class of the Material being entered on a Sample, Field Inspection Report (FIR), or Material Receipt Report (MRR) matches the Concrete Class of the Concrete Mix Design being entered.

This insures that the correct specifications for the Material are used for reference.

What this means for the user is that Concrete Mix Designs that were previously able to be selected for use may no longer be available until changes are made to the Contract Bill of Material (CBOM) for the contract.

The HiCAMS modules impacted by this change are:

CONTRACT TRACKING

- Review Material Receipts

FIELD INSPECTION REPORTS

- Precast Concrete
- Prestressed Concrete
- Review Concrete Pavement

SAMPLING

- Enter Sample Details

Working with Concrete and Concrete Classes

As an example, a user has been asked to enter a concrete sample for Contract C201550, Line item 71 "1'-6" Concrete Curb and Gutter". The concrete used is Class B. The mix design on the sample is 469MVFP27BE.

After entering the basic information on the sample, it is time to enter the Concrete Mix Design. The user enters the plant id (RM469) on the Prod/Supp tab of the sample, and clicks on the Concrete Mix Design selection icon. The window opens and looks like this:

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Review Sample Details - Sample (Untitled)

*Sam Select a Concrete Mix Design

Mix Design ID: Status: (All)

Producer's Mix ID: Metric/English: Both

Class of Concrete: Class B

Air-Ent. and Vibration Status: (All)

Pozzolan Type: (All)

Concrete Facility: S & W Ready Mix Concrete Co. , S&W Ready Mix Concrete - Southport - RM469

Contract: C201550 Plant ID:

Mix Design ID	Expiration	Producer's Mix ID	Class of Concrete	Metric/English	Concrete Facility	Plant ID
469BNFP27BNVE	12/31/2075	P27BNV	Class B	English	S & W Ready Mix Concrete Co. - S&W Ready Mix Concrete - Southport Southport NC	RM469

OK Cancel

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Ready

Notice that the class of concrete is now set to Class B. Previously, all concrete mix designs assigned to the contract from that plant were displayed. Before the correct Concrete Mix Design will appear, changes will need to be made to the Contract Bill of Materials.

Note: It is not necessary to lose the data already entered on the Sample. In this case, just cancel the Select a Concrete Mix Design window and then determine the Class of Concrete assigned to the mix design on the Sample. Once the material has been added to the CBOM, it can be changed on the Sample, and data entry can continue.

Determining the Concrete Class Required for a Material

If you find that you are unable to enter your MRR, Sample, or FIR for a concrete material, follow these steps:

- Step 1:** Go to **References > Concrete Mix Designs > Review Mixes**.
- Step 2:** Enter your Contract Number and click Retrieve. All of the Concrete Mix Designs assigned to your contract will be displayed.
- Step 3:** Find the Mix Design ID for the mix you are trying to use. Now look in the column labeled "Class of Concrete". This is the class of concrete that must be assigned to the material on the contract's CBOM in order for the Mix Design to be used.

The screenshot shows the HICAMS application window with the 'Concrete Mix Design' dialog box open. The dialog box has a 'General' tab and a table of mix designs. The table has columns: Mix Design ID, Expiration, Producer's Mix ID, Class of Concrete, Metric/English, Concrete Facility, and Plant ID. The selected row is 469MVFP27BVE, which has a Class of Concrete of 'Class B, Curb & Gutter Machine'. The status bar at the bottom says 'Ready'.

Mix Design ID	Expiration	Producer's Mix ID	Class of Concrete	Metric/English	Concrete Facility	Plant ID
469DYFP27AADSE	12/31/2075	P27AADS	Drilled Shaft	English	S & W Ready Mix Concrete Co. - S&W Ready Mix Concrete - Southport Southport NC	RM469
469DYFP27DSCNIE	12/31/2075	P27DSCNI	Drilled Shaft	English	S & W Ready Mix Concrete Co. - S&W Ready Mix Concrete - Southport Southport NC	RM469
469MVFP27BVE	12/31/2075	P27BV	Class B, Curb & Gutter Machine	English	S & W Ready Mix Concrete Co. - S&W Ready Mix Concrete - Southport Southport NC	RM469
469RVFP27AABRE	12/31/2075	P27AABR	Class AA, Slip-form Barrier Rail	English	S & W Ready Mix Concrete Co. - S&W Ready Mix Concrete - Southport Southport NC	RM469

In this example, the Class of Concrete assigned to this mix design is Class B, Curb and Gutter Machine. This concrete class must be assigned to the material on the Contract Bill of Materials before the mix design can be used on the sample.

Adding the Material to the Contract Bill of Materials

Note: For complete information on working with the Contract Bill of Materials for your contract, please refer to the User Guide "Review Contract BOM" on the HiCAMS home page.


- Step 1:** Open the Contract Bill of Materials for the project and select the Line Item to which materials need to be added, in this case, Line Item 71. Click the Insert button. The Material Selection window opens.
- Step 2:** For the Material Type, select Concrete, Class B from the drop down list, and click Retrieve. The Material Selection window opens.

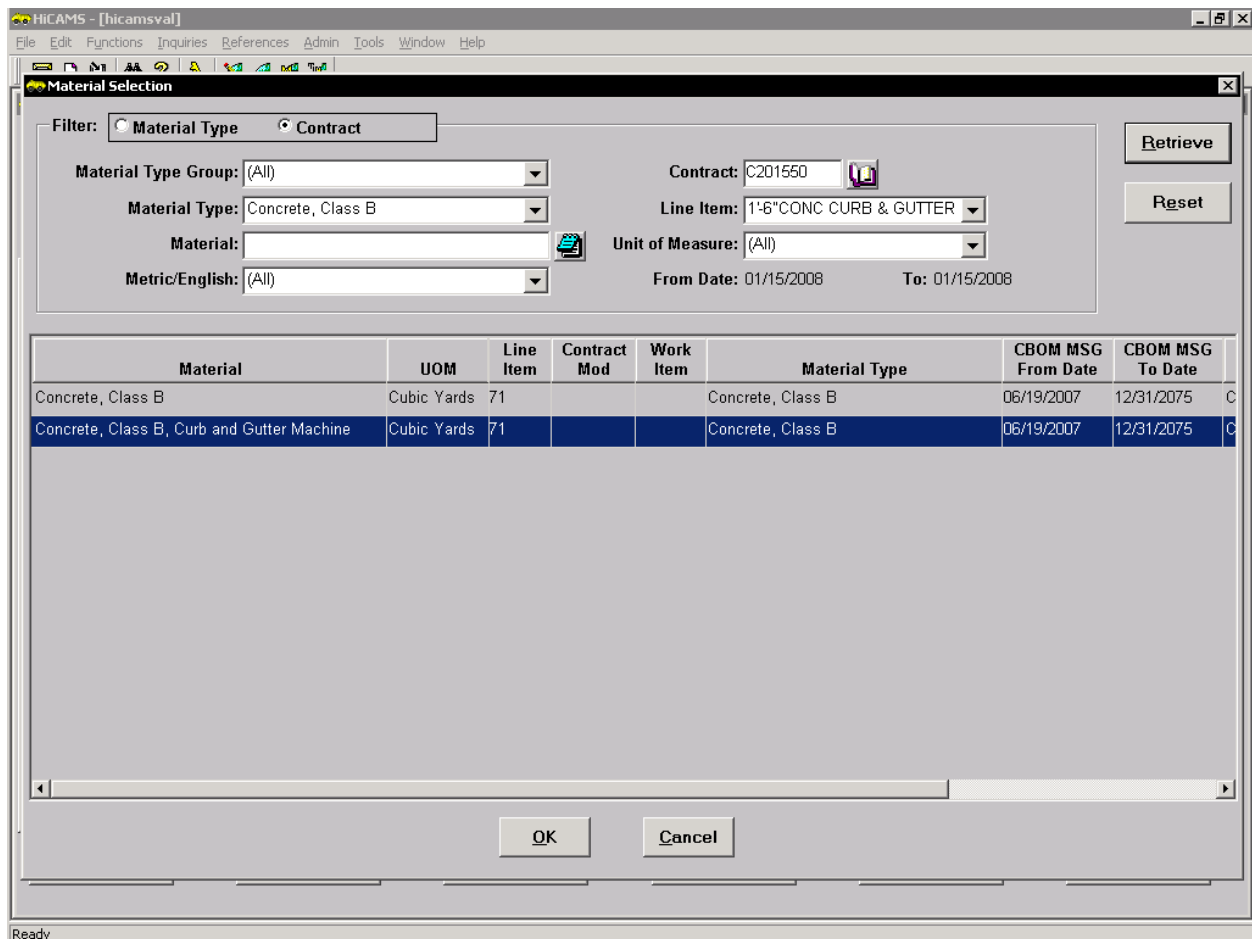
Material	UOM	Group	Material Type	Version	Metric/ English	MSG Status	From Date	To Date
Concrete, Class B	Cubic Yards	Concrete	Concrete, Class B	4.00	English	Current	01/01/1999	12/31/2075
Concrete, Class B, Curb and Gutter Mach	Cubic Yards	Concrete	Concrete, Class B	4.00	English	Current	01/01/1999	12/31/2075

- Step 3:** Select the Material that has the correct concrete class from the list and click OK. Enter the conversion factor and Save.

Completing the Sample Entry

Return to the Review Sample Details window and change the material selected for the Sample.

To change the Material selected, click on the material selection icon . Change the line item to the sample line item and Retrieve. This is how the Material Selection window looks now that the material has been added to the Contract BOM:



Material Selection window showing filters and a table of materials.

Filter: ☐ Material Type ☒ Contract

Material Type Group: (All) Contract: C201550

Material Type: Concrete, Class B Line Item: 1'-6"CONC CURB & GUTTER

Material: Unit of Measure: (All)

Metric/English: (All) From Date: 01/15/2008 To: 01/15/2008

Material	UOM	Line Item	Contract Mod	Work Item	Material Type	CBOM MSG From Date	CBOM MSG To Date
Concrete, Class B	Cubic Yards	71			Concrete, Class B	06/19/2007	12/31/2075
Concrete, Class B, Curb and Gutter Machine	Cubic Yards	71			Concrete, Class B	06/19/2007	12/31/2075

OK Cancel

Select Concrete, Class B, Curb and Gutter Machine and click OK.

Click on the Concrete Mix Design selection icon and when it opens, the Class of Concrete is now set to Concrete, Class B, Curb and Gutter Machine, and the Mix Design on the sample card is now available.

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Review Sample Details - Sample (Untitled)

*Sam Select a Concrete Mix Design

Mix Design ID: Status: (All)

Producer's Mix ID: Metric/English: Both

Class of Concrete: Class B, Curb & Gutter Machine

Air-Ent. and Vibration Status: (All)

Pozzolan Type: (All)

Concrete Facility: S & W Ready Mix Concrete Co., S&W Ready Mix Concrete - Southport - RM469

Contract: C201550 Plant ID:

Mix Design ID	Expiration	Producer's Mix ID	Class of Concrete	Metric/English	Concrete Facility	Plant ID
469MVP27BVE	12/31/2075	P27BV	Class B, Curb & Gutter Machine	English	S & W Ready Mix Concrete Co. - S&W Ready Mix Concrete - Southport Southport NC	RM469

OK Cancel

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Ready

Continue filling out the sample card information and Save the Sample.

If a previously used Concrete Mix Design is no longer available for use on a Material Receipt Report or Field Inspection Report, follow the same process to update the Contract Bill of Materials with the correct material.

Remember

- Two of the materials impacted by this change were Class B Concrete for Curb and Gutter Machine and Class AA concrete for Slip Form Barriers. These materials will need to be added to the CBOM on existing contracts in order to enter Samples correctly. The materials have been added to the Master Bill of Materials so contracts going forward will have both materials.
- If a higher class of concrete was used in place of the required class, the concrete is still tested against the specifications for the actual, higher class of concrete. The Engineer is allowed to accept the material if it meets the requirements for the lesser class.